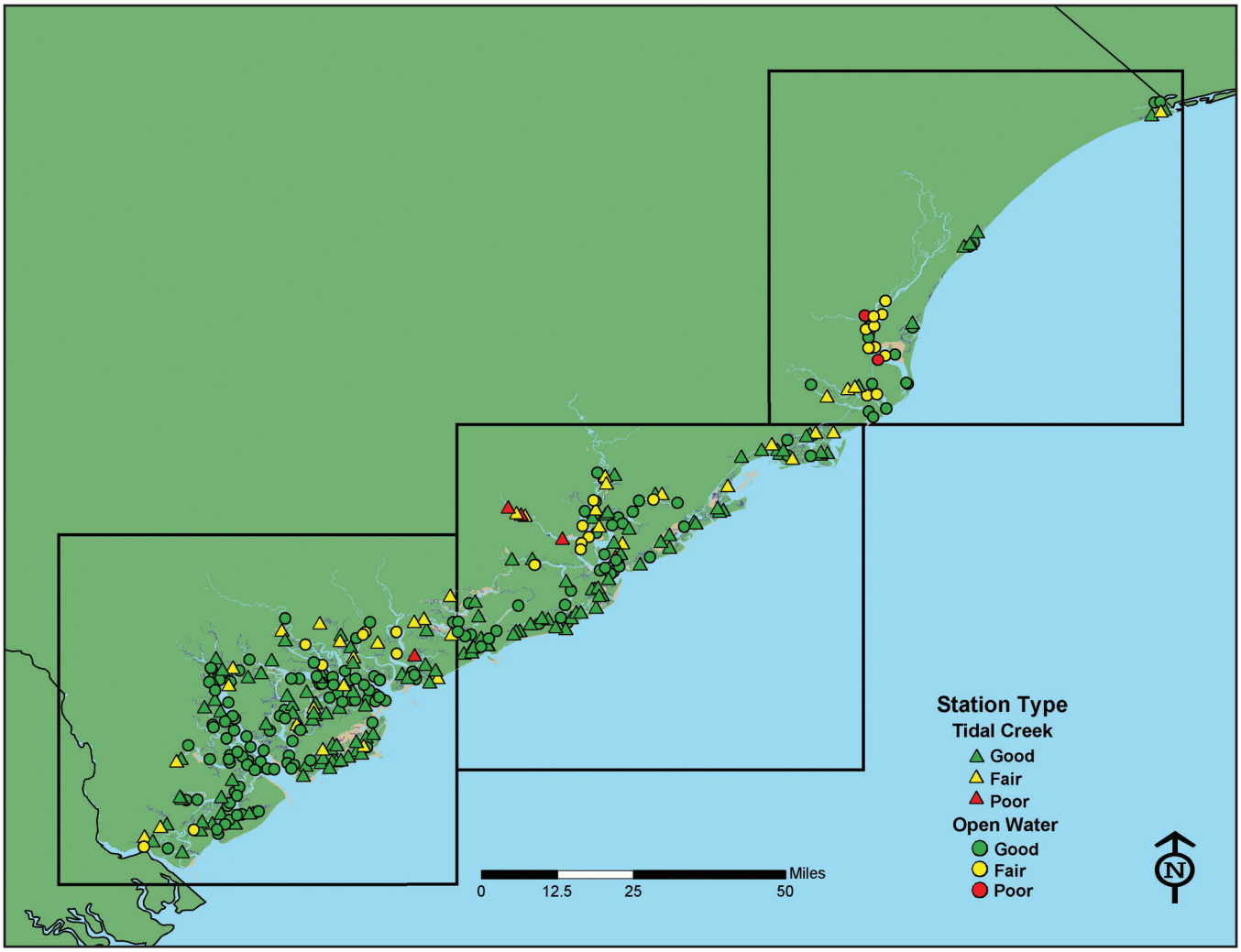

Figure 3.6.5. Distribution of open water and tidal stations sampled in South Carolina between 1999 and 2004 that had an integrated habitat quality score of good, fair, or poor based on an integrated measure of water quality, sediment quality, and biotic condition.

Figure 3.6.6 depicts the overall trend in habitat quality by year for both tidal creek and open water habitats combined, as well as for each habitat separately. As mentioned earlier in the report, tidal creek habitats represent only 17% of the overall estuarine habitat in the state and are therefore weighted less in the combined habitat assessment.

Since 2000, there has been a slight decrease in percentage of the state's estuarine habitat that is considered to be good (approximately 5%), although it should be noted that 1999 was comparable to the percentage in 2004. When evaluating overall habitat quality for open water habitat only, there is a greater decline of approximately 13% in the amount of good estuarine habitat from 1999 to 2004. This same pattern was not observed in tidal creeks, which showed relatively similar percentages of good tidal creek habitat from 1999-2003, and then an increase in 2004 (Figure 3.6.6). While none of these trends are statistically significant, it will be critical to continue monitoring overall habitat quality to determine whether the increasing impairment noted in open water habitat and all habitats combined poses a long-term threat to the health of our estuaries.

3.7 Future Program Activities

The SCECAP database has already provided a valuable resource that continues to be tapped by

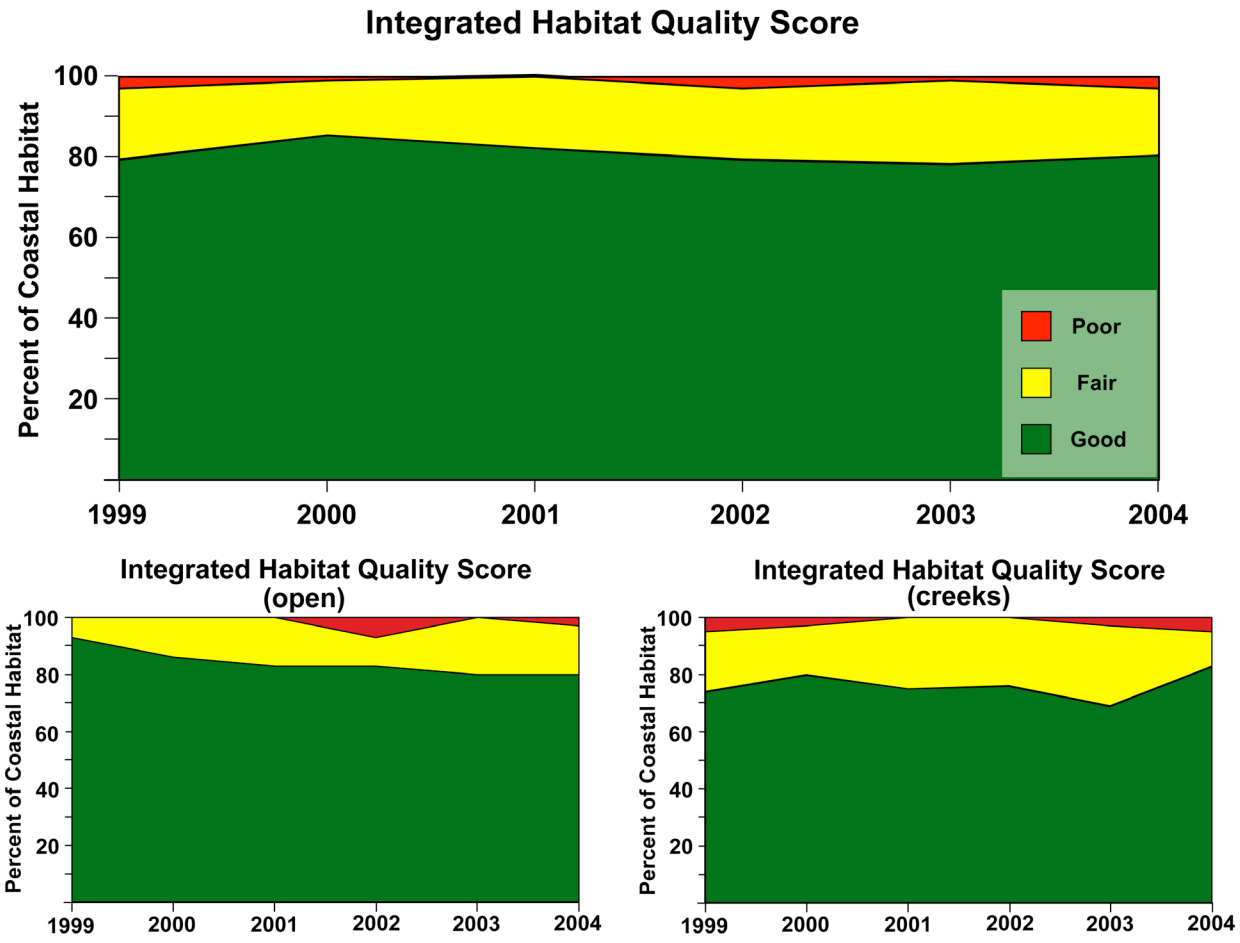

Figure 3.6.6. The proportion of South Carolina's estuarine habitat that ranks as good (green), fair (yellow) or poor (red) using the integrated habitat quality score when tidal creek and open water habitats are combined and compared on an annual basis.

programs within the SCDNR as well as by other governmental agencies and non-profit organizations. For example, the NOAA Dolphin Survey and the NOAA Oceans and Human Health Initiative (OHHI) have mined the SCECAP database in order to relate estuarine environmental measures with dolphin health and land use characteristics, respectively. In 2002-2003, a multi-agency study was conducted for the Town of Bluffton to assess the existing health of the May River (Van Dolah *et al*., 2004b). That study utilized a comparable sampling approach and relied on existing SCECAP sampling to obtain data from relatively pristine estuarine locations sampled in the southern portion of the state for comparison as reference sites, thereby considerably reducing expenses for the Town of Bluffton. The Nature Conservancy is currently utilizing the SCECAP database to evaluate the condition and integrity of the Sewee-Santee-Winyah estuarine complex in order to develop a conservation action plan for the area. Additional analyses are also in progress using SCECAP and other databases to evaluate the relationships between land use patterns and estuarine habitat quality (Van Dolah *et al.,* in prep.) with the longer-term goal of developing models describing the interactions between human development and coastal ecosystems.

Funding for SCECAP through the USEPA is expected to be terminated in 2007. This will necessitate a major restructuring of the program with respect to environmental variables assessed and number of sites sampled per year, dependent on alternative funding sources. Given the growth in South Carolina's coastal zone and the likelihood that this will result in further degradation of our estuaries, it is imperative that the